Habitat Management Plan

ALDI Stores - Mirfield
8th June 2023

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Tyler Grange

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Summary

S.1. This Habitat Management Plan has been prepared by Tyler Grange Group Ltd. (TG) on behalf of ALDI Goldthorpe. It has been prepared to inform a proposed development site for construction of an ALDI Store within the boundaries of Kirklees Council.

S.2. The 'site' is located south of the Huddersfield Road / The Maltings road junction in Mirfield, West Yorkshire and is centred at Ordnance Survey National Grid Reference SE 19839 20004. The site comprises a caravan park, with a large central area of hardstanding. To the north of the site is Huddersfield Road and beyond this residential housing, to the east is scrub, amenity grassland and industrial units and to the south is a line of trees separating the site from neighbouring industrial units. The River Calder is present immediately to the south.

S.3. The purpose of the Habitat Management Plan is to discharge part of a planning condition for the reserved matters application of the proposed development, planning application reference 2022/90890.

Section 1: Introduction and site context

Purpose

1.1. This Habitat Management Plan has been prepared by Tyler Grange Group Ltd. (TG) on behalf of ALDI Goldthorpe. It has been prepared pursuant to the submission and approval of an 'Environmental Design Strategy (EDS)' for construction of an ALDI Store.

1.2. The 'site' is located south of the Huddersfield Road / The Maltings road junction in Mirfield, West Yorkshire and is centred at Ordnance Survey National Grid Reference SE 19839 20004. The site comprises a caravan park, with a large central area of hardstanding. To the north of the site is Huddersfield Road and beyond this residential housing, to the east is scrub, amenity grassland and industrial units and to the south is a line of trees separating the site from neighbouring industrial units. The River Calder is present immediately to the south of the site.

1.3. The purpose of the Habitat Management Plan is to discharge Condition 6 of the Reserved Matters consent, which reads:

" There shall be no commencement of the development hereby permitted until a Habitat and Landscape Management Plan, pursuant to the approved Environmental Design Strategy [EDS] has first been submitted to and approved in writing by the Local Planning Authority. The content of the plan shall include the following:

[1]. Site role and responsibilities;

[2]. Good practice guidelines for construction works;

[3]. Specification of measures that will result in the creation of features of ecological value as part of the development site (including bat and bird boxes);

[4]. Specifications of a proposed lighting strategy to avoid habitat suitable for bats and birds;

[5]. Details of planting mitigation relevant to birds;

[6]. Pollution Prevention Measures to be put in place for works near the river Calder to protect any fauna in may support;

[7]. An invasive species biosecurity and management plan in line with best practice;

[8]. Recommended timings of works to avoid ecological constraints such as nesting birds, roosting bats and hedgehogs; and,

[9]. Ongoing monitoring and remedial measures;

Coverage

1.4. This HMP will set out details of initial creation and subsequent long-term management of habitats and is set out as follows:

- **Section 2** describes the site context and habitat creation needed along this site. Management regimes will also be laid out;
- **Section 3** sets out enhancement objectives for the HMP and describes timelines that need to be followed to stay within legislation boundaries;
- **Section 4** describes habitat feature creations, outlining their general descriptions and any legislation or seasonal restrictions that need adhering to;
- **Section 5** describes the management regimes required for the newly created habitat features in **section 4**;
- **Section 6** concludes this report and outlines how conditions will be met through following the detailed contained within this report.

1.5. Implementation of the plan will be iterative in the management prescriptions and will be refined as necessary based on the condition of the site and outcomes following the first cycle of the implemented management and ongoing monitoring – full details are provided in **Section 6** of this report.

1.6. This report must be read alongside the EDS strategy for the site for full context. Where relevant, this report references the individual components of Condition 6 in terms of how the information presented complies with the information requested by condition.

1.7. It does not include details of invasive species management (as per item [7] of Condition 6), as this is already presented within the existing EDS for the site and should be read in conjunction with this report to provide full information regarding the discharge of this element of the Condition.

1.8. It must also be read alongside the following documents:

- Fauna enhancement strategy produced by Tyler Grange (15919_R01), which contains full details regarding the specification of the bat and bird box enhancements pursuant to element [3] of Condition 6. A plan showing the location of the faunal enhancement features targeting birds and bats is presented in **Appendix 1**.

Section 2: General Measures

Site role and responsibilities [Element 1]

2.1. Prior to any works commencing on-site, and as detailed within the EDS, a 'Biodiversity Champion' will be nominated – this will be the site manager of the construction firm appointed by ALDI. We understand that this will be 'Forge Construction Management'.

2.2. It will be the responsibility of the 'Biodiversity Champion' to ensure the contents of this management plan are implemented, and any remedial measures actioned.

2.3. A Suitably Qualified Ecologist (SQE) will also be appointed to act as a direct point of contact for the Biodiversity Champion. It will be the role of the SQE to undertake the necessary monitoring and assessing compliance against this plan. Any discrepancies will be reported to the appointed Biodiversity Champion at the earliest available opportunity, and the Biodiversity Champion will then be responsible for actioning any remedial measures.

2.4. It will be the responsibility of the SQE to deliver a toolbox talk to discuss the contents of this HMP and overarching EDS, and it will be the responsibility of all site operatives to adhere to the contents of the toolbox talk.

Good practice guidelines for construction works and Pollution Prevention Measures [Element 2 and 6]

2.5. This section details general best-practice construction methodologies and pollution prevention measures. This includes:

- General site tidiness i.e. not leaving any rubbish or loose site materials;
- Ensuring wheel-washing facilities are available to prevent excessive dust pollution;
- Watering of the site during periods of drought to minimise dust pollution;
- Ensuring, where appropriate, all site materials are kept in covered skips or off the ground on pallets;
- All excavations within the site are either sealed overnight, or with mammal ramps provided to allow any fauna which enters the excavation the chance to escape;
- Capping all pipework >300mm overnight;
- No night-time work, or illumination of sensitive features. In this instance this is the southern boundary river Calder corridor;

2.6. Although the official 'Pollution Prevention Guidelines' produced by the government (PPG5) have been withdrawn, there is no current alternative and the detail within considered relevant. Measures required specifically for pollution prevention of the River Calder include:

- Plant and wheel washing is placed at least 10m from any drain of watercourse;
- Brushing and scraping of roads to reduce dust and mud deposits;
- Working from the top of the bank and not in the river for the area of retaining wall installation;
- Ensuring a spill kit is available at all times;
- Provision of sandbags or silt netting, where necessary, along the southern boundary of the site to catch any surface water run-off into the River Calder during the construction phase;
- Refuel mobile plant in a designated area away from watercourses;
- Use a bunded bowser;
- Position drip trays under pumps;
- Provide incident response training to all site operatives;

Section 3: Site and Habitat Creation Summary

Site location

3.1. The extent of the site is denoted by the red line boundary as shown in **Figure 1** below and is centred on (OS) grid reference SE 19839 20004. It is located south of the Huddersfield Road / The Maltings road junction in Mirfield, West Yorkshire and is bordered by the River Calder, immediately to the south.

Figure 1 - Location of proposed development. Outline shown by redline boundary.

Habitat Creation

3.2. Created habitats have been identified from the Landscape Plan (Appendix 2). New habitats on site will include:

- Buildings (One Class A1 Retail Unit);
- Hard standing (car park);
- Introduced shrub;
- Urban trees; and
- Grassland – other neutral grassland.

3.3. The specifications for the soft landscaping are given in **Appendix 2.**

Introduced Shrub

3.4. The proposed introduced shrub planting is comprised of 150 Hebe 'Mrs Winder' shrubs and 85 *Hebe rakaiensis* shrubs. Both species are bushy, to a height of 30-40cm. This will provide nesting habitat suitable for commonly encountered urban bird species such as wren *Troglodytes troglodytes,* dunnock *Prunella modularis*, robin *Erithacus rubecula* and blackbird *Turdus merula* once mature – therefore contributing compliance with element [3] of Condition 6.

3.5. Planting holes should be 150mm wider than the root spread, with the base ground thoroughly broken up and prepared beforehand and backfilled with peat-free compost. Shrubs should be equally spaced in a staggered arrangement.

Management and Timescales:

3.6. A 75mm depth of 8-35mm ornamental bark mulch (peat-free), to be spread to all planting areas. Finished mulch level to be installed and maintained at 25mm below any adjacent kerbs or paving surfaces.

3.7. Following planting a 12-month maintenance schedule will be enacted. The maintenance schedule will consist of a minimum of 12 visits with the following timings:

- March – May and September – November: One visit per month
- June – August: 2 visits per month

3.8. The maintenance visits will comprise the following tasks:

- All planting beds to be re-firmed and kept weed free through hand weeding;
- All litter to be picked and removed from landscaped areas;
- Mulch to be topped up as required to maintain the specified thickness of 75mm;
- Shrubs to be pruned only between September and February inclusive for each species to promote healthy growth and desirable ornamental features. This will also avoid the 'core' nesting bird season, and comply with element [8] of Condition 6
- Watering of trees, grass and ornamental shrub planting;
- Soil should be checked for dryness using either a soil moisture sensor or by inserting a spade into the soil to a depth of 300mm to observe the appearance of the soil. The full depth of topsoil should be wet without loosening or damaging plants. Any compacted soil should be broken up sufficiently to allow water to reach the rootzone.

Table 1 - Management and timings of shrubs

Item	Timing
Initial planting	Container grown ornamental and specimen shrubs can be planted at any time if ground and weather conditions are favourable. i.e. soil not waterlogged and no frost expected.
Mulch application	Applied on planting and topped up when necessary, during monthly maintenance visits (within the first year).
Replacement of defective or failed plants	Monitored during maintenance visits and replaced as needed (in first 12 months).
Watering Schedule	Completed during maintenance visits, with more watering visits during dry periods as needed.

Urban Trees

3.9. One European Hornbeam *Carpinus betulus* 'Frans Fontaine' tree is proposed to be planted within the other neutral grassland in the north-western corner of the site and four Callery pear *Pyrus calleryana* 'Chanticleer' within the car parking area in the centre of the site.

3.10. Trees should be planted and watered in accordance with guidance BS 8545-2014 Tree – From Nursey to Independence.

3.11. All trees are to be planted to the original root collar and secured in place with an underground guying system. If trees are planted outside of the planting season then containerised stock should be used. However, containerised stock should be of the same specifications (including height) as root balled stock.

3.12. Irrigation/aeration pipes should be installed around the base of trees and stem in accordance with manufacturer's instructions, to ensure that the water reaches tree roots. Soil dryness should be monitored during the maintenance visits and the watering regime adjusted as necessary.

3.13. Tree planting will also provide suitable nesting habitat for commonly encountered bird species such as wood pigeon *Columba palumbus*, collared dove *Streptopelia decaocto* and magpie *Pica pica*, further complying with element [3] of Condition 6.

Table 2 - Management and timings of trees

Item	Timing
Initial Planting	During dormant winter period – late October to late March (only if planted in the planting season otherwise containerised stock to be used).
Tree guards/stalks installed	On the same day as planting.
Monitoring of tree health/condition, with ties and stakes adjusted or replaced as necessary	During maintenance visits for first 12 months.
Watering	March – October: 40 litres to be poured into irrigation pipe upon maintenance visit.

Grassland – Other neutral grassland

3.14. Other neutral grassland is proposed for the area under and adjacent to the broadleaved woodland, on the south-western boundary of the site and along the western boundary of the site. The landscape Plan states that Germinal seeds RE3 River floodplain / water meadow mix (or similar) is used, alongside plug plants of the following species: meadow foxtail *Aleopecurus pratensis*, marsh marigold *Caltha palustris*, common knapweed *Centaurea nigra*, great burnet *Sanguisorba officinalis* (25% of each). The grassland seed mix has a target community of MG8 crested dog's tail *Cynosurus cristatus* – marsh marigold *Caltha palustris* flood pasture. However, it is suggested that a woodland grassland seed mix such as Emorsgate woodland mixture EW11[1] or Germinal seeds WFG8 Hedgerows and shaded areas2[2] (or similar) is used in the south-western area, as a woodland understory seed mix will tolerate shading from the existing trees and will assist in the woodland enhancement.

3.15. Specifications for the creation of grasslands and other soft landscaping are detailed in the Landscape Plan. The depth of subsoil to be used for wildflower grassland areas is a minimum of 150mm depth. Soils should be prepared prior to seeding, by applying a suitable herbicide and waiting the appropriate period of time (as per manufacturer's instructions) before seeding. Compacted soil should be broken up and any grass tufts or debris larger than 50mm removed. Topsoil should be carried out when the soil is moist and friable and not during frozen or waterlogged conditions.

River floodplain meadow grassland

3.16. Areas should be sown in accordance with BS3969:1998: Recommendations for tuft for general purposes at a rate of 5/m2. The plug plants should be scattered randomly through the seeded area at a rate of 3/m2 in groups of 3-5 plugs together of the same species. They will be planted using a bulb planter with each bulb pit being part-filled with seed compost before

[1] https://wildseed.co.uk/product/mixtures/complete-mixtures/special-habitat-mixtures/woodlandmixture/ Accessed May 2023
[2] https://germinalamenity.com/wfg8-hedgerows-and-shaded-areas Accessed May 2023

being well watered. The plugs should be well-watered in the first 6 weeks of planting. When the plants reach 70mm this is the final mowing height.

Management and Timescales

3.17. Cut to a height of 70-100mm and remove the arisings. The initial cutting should ensure that the cutting height of the mower is high enough so just the top of the plug plants is mown. Consider allowing up to a fifth of grassland to stand uncut through the winter and cut and remove clippings in March. Rotate this section yearly. Other than the uncut section the grassland can be lightly mown to 70-100mm as needed from October – March with arisings removed. Keep the sward substantially free of broadleaved weeds, by hand-pulling.

Table 3 - Management and timings of grassland

Item	Timing
Sowing	Autumn (ideally) or Spring.
First cut (year one, if autumn sown)	Early July, then monthly during August, September and October.
First cut (year one, if spring sown)	Mid-September – 1st October and collect arisings. Monthly afterwards until end of October.
Cutting (every year after year one)	Mid-July – early September, collect the arisings.

Woodland mixture grassland

3.18. Areas should be shown at a rate of 40kg/ha or per manufacturers specifications. Areas should be prepared as per guidance above and in the Landscape Plan (Appendix 2), however, care should be taken near established trees and shrubs, to avoid damaging root systems. Do not dig deep and keep disturbance to a minimum. Areas should be sown in Autumn or early spring. Established woodland that has been under sown with woodland grassland mixture, requires little management afterwards. In more open areas an annual cut mid-summer may be required to keep weeds such as nettles and brambles in check.

Section 4: Habitat Enhancement

Woodland and forest – Other broadleaved woodland

4.1. The overall goal of the existing woodland management is to improve upon the habitat condition score, which is currently poor, with the goal of achieving a moderate condition score within a 10 year period. The management aims to minimise invasive species, create a recognisable NVC understory community and to increase the volume of deadwood present.

Management and Timescales

4.2. There are large areas woodland which contain non-native invasive species as listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), including Himalayan balsam *Impatiens glandulifera*, Japanese knotweed and cotoneaster species (see Tetra Tech's Habitat Features Plan for location of the invasive non-native species). In order to achieve moderate condition, species listed on Schedule 9 should be carefully removed as documented in Tetra Tech's Invasive non-native species removal guide. When invasive species such as Japanese knotweed have been successfully eradicated there will bare areas within the woodland. In addition, the woodland does not currently have a recognisable ground flora community. The woodland will be under sown as described in Section 2 with the aim to establish a woodland understory and to provide further opportunities for wildlife. Besides this, the woodland should be managed with wildlife in mind. After initial establishment, management should be minimal with fallen deadwood left in situ as a resource for invertebrates and fungi. Standing deadwood should also be retained (unless dangerous) as roosting resource for bats and birds.

Riverbank

4.3. The overall goal of the existing riverbank management is to improve upon the habitat condition score, which is currently poor, with the goal of achieving a fairly poor condition score within a 2 year period. The management aims align with those for the woodland and aim to increase the biodiversity of the riverbank through removal of invasive species and aiding the establishment of native woodland and bankside species, alongside sympathetic management of the riverbank for wildlife.

Management and Timescales

4.4. As described above the removal of invasive species from the riverbank will create bare areas within the woodland. These areas present an opportunity to enhance the woodland by establishing native woodland and bankside species in place of the invasives. A total of 5 trees are proposed for removal on the northern boundary of the woodland. This will open up the woodland at this point and allow more light to penetrate to the ground flora, which will aid the natural establishment of woodland and aquatic marginal plants. As described in section 2 the woodland will be under sown to aid establishment of a recognisable NVC community. As the bank is steeply sloped, pre-planted coir can be used to stabilise the bank and to introduce a diverse plant assemblage to the site. For the trees that have been removed the deadwood can be retained to provide niches for invertebrates and pined to the bank to reduce any flood risk.

Section 5: Ecological Feature Management/Monitoring [Element 3 and 9]

Bat Boxes

5.1. It may take several years for a bat box to become occupied, and it can be difficult to know whether roosting bats are present on any occasion. Bats typically use a variety of temporary roosts during the summer, spending a night or two in one location, before moving on to roost elsewhere then returning. Bats are usually active from March to October inclusive, hibernating during the winter months.

5.2. Monitoring and maintenance works required for bat boxes should include:

- Bat boxes will be checked externally, from the ground using binoculars, to visually check for damage. This will be done annually during summer. A bat licensed ecologist should be informed if the box appears to be damaged or requires maintenance.
- If work is required in relation to the bat boxes when occupied than a licence will be required. If there is no evidence of roosting bats, the boxes will be checked by the bat licensed ecologist to see if they are in a reasonable condition and cleaned if necessary.
- Sometimes birds may occupy a bat box in which instance the (former) bat box will then be treated as a bird nest box until any chicks have fledged.

Bird Boxes

5.3. Bird boxes will be checked and maintained annually outside of breeding bird season (March – September inclusive), removing old nests and cleaning if required, with the aim of restoring the box to its original state. Should a box be damaged or missing during these checks then it should be fixed or replaced like-for-like. If there are eggs/young present in the box, leave the box as it is; some species will breed all year round.

Lighting Strategy [Element 4]

5.4. The lighting strategy for the site is presented in **Appendix 3**. The only sensitive part of the site is the southern boundary tree line along the River Calder. In the absence of mitigation, several columns (highlighted in **Figure 2** below) would result in lux levels which may deter bats from utilising this corridor. For this reason, additional mitigation has been proposed on these particular lights to include:

- For the 'K' type fittings, which currently comprise up and downlighters, the 'uplit' element of the fitting will be omitted so the light is direct downwards only.
- For the fittings around the plant yard, timers will be in place only in the event of plant maintenance and will otherwise be turned off.

Section 6: Monitoring and Remedial Measures [Element 9]

6.1. As detailed within the management prescriptions and timings set out in the EDS, the site will also be periodically monitored by the Biodiversity Champion and SQE to ensure the requirements set out in the EDS and this management plan are adhered to. **Table 4** below sets out the monitoring/remedial measures proposed for the duration of the management plan.

Table 4 – Monitoring and Remedial Measures

Year	Methodology and Timing	Deliverable	Remedial Action
1	UK Habitat Classification Survey and Condition Assessment, to be completed by a Suitably Qualified Ecologist (SQE) competent in such methodology. Undertaken between April – September.	Monitoring report to Council to confirm the outcome of the survey. In Year 1 this will comprise confirmation that the habitats have been installed to the correct methodology over the correct area. It is not expected that the habitats will have achieved its target condition at this point.	Should the survey identify that habitats have been installed to the wrong specification or in the wrong area, the SQE will relay this to ALDI and their appointed contractor to rectify immediately and within the same planting season.
2	UK Habitat Classification Survey and Condition Assessment, to be completed by a Suitably Qualified Ecologist (SQE) competent in such methodology. Undertaken between April – September prior to cutting.	Monitoring report to Council to confirm the outcome of the survey. In Year 1 this will comprise confirmation that the habitats have been installed to the correct methodology over the correct area. It is not expected that the habitats will have achieved its target condition at this point.	Should the survey identify that habitats have been installed to the wrong specification or in the wrong area, the SQE will relay this to ALDI and their appointed contractor to rectify immediately and within the same planting season.
3	UK Habitat Classification Survey and Condition Assessment, to be completed by a Suitably Qualified Ecologist (SQE) competent in such methodology. Undertaken between April – September prior to cutting.	Monitoring report to Council to confirm the outcome of the survey. In Year 1 this will comprise confirmation that the habitats have been installed to the correct methodology over the correct area. It is not expected that the habitats will have achieved its target condition at this point.	Should the survey identify that habitats have been installed to the wrong specification or in the wrong area, the SQE will relay this to ALDI and their appointed contractor to rectify immediately and within the same planting season.

Year	Methodology and Timing	Deliverable	Remedial Action
5	UK Habitat Classification Survey and Condition Assessment, to be completed by a Suitably Qualified Ecologist (SQE) competent in such methodology. Undertaken between April – September prior to cutting.	Monitoring report to Council to confirm the outcome of the survey. In Year 5 this will comprise confirmation that the habitats are developing accordingly.	In Year 5, it should be evident if the grassland mixes are taking seed and developing appropriately. If it is apparent that weed species are dominant, remedial measures will comprise more intensive management to combat weed species, coupled with targeted spot-treatment where necessary. At Year 5, the grassland should be relatively well-established so if indicator species of the grassland are not present, more intensive remedial measures will need to be considered. This may comprise overseeding with the same seed mix and implementing a more intensive cutting programme to combat weed species, along with plug-planting of selected species.
10	UK Habitat Classification Survey and Condition Assessment, to be completed by a Suitably Qualified Ecologist (SQE) competent in such methodology. Undertaken between April – September prior to cutting.	Monitoring report to Council to confirm the outcome of the survey. In Year 10 this will comprise confirmation that all habitats have developed. At Year 10, all habitats should have either achieved or be close to achieving its target condition, and the monitoring report will confirm this, or the remedial measures which are being actioned to rectify.	The habitats should have either achieved or close to its target condition by Year 10. If this is not the case, and the over-seeding/more intensive management considered in Year 5 has not worked, more intrusive ground investigations/topsoil stripping would need to be considered.
15	UK Habitat Classification Survey and Condition Assessment, to be completed by a Suitably Qualified Ecologist (SQE) competent in such methodology. Undertaken between April – September prior to cutting.	Monitoring report to the Council to confirm the outcome of the survey. In Year 15 this will comprise confirmation that all habitats have developed. At Year 15, all habitats should have either achieved or be close to achieving its target condition, and the monitoring report will confirm this, or the remedial measures which are being actioned to rectify.	The habitats should have either achieved or close to its target condition by Year 15. If this is not the case, and the over-seeding/more intensive management considered in Year 5 has not worked, more intrusive ground investigations/topsoil stripping would need to be considered.

Year	Methodology and Timing	Deliverable	Remedial Action
30	UK Habitat Classification Survey and Condition Assessment, to be completed by a Suitably Qualified Ecologist (SQE) competent in such methodology. Undertaken between April – September prior to cutting.	Monitoring report to the Council to confirm the outcome of the survey. In Year 30 this will comprise confirmation that the habitats have developed. At Year 30, all habitats should have achieved their target condition, and the monitoring report will confirm this, or the remedial measures which are being actioned to rectify.	All habitats should have achieved target condition by Year 30. If at the point of Year 30 it is apparent that the grassland is failing, remedial action would have been put in place to rectify it so by Year 30 there has been adequate time (10-years) to restart the habitat creation and confirm by Year 30 that the habitat creation measures targeted have been successful and the necessary number of BNG units delivered.

Section 7: Conclusion

7.1. Provided the strategy and recommendations outlined in this report are followed, then development proposals would comply with relevant wildlife legislation and planning policy. Furthermore, if followed in its entirety, this management plan will fulfil the requirements of Condition 6 of the consent.

Appendix 1: Fauna Enhancement Scheme

Redline Boundary

WoodStone® Kingfisher Tunnel

Starling Nest Boxes

Sparrow Terrace Nest Box

Vivara Pro Barcelona WoodStone Open Nest Box

Beaumaris Woodstone Bat Box

Schwegler 2F General Purpose Bat Box

N

0 25 m

Project	ALDI Stores, Mirfield
Drawing Title	Fauna Enhancement Scheme
Scale	As Shown (Approximate)
Drawing No.	15919/P01
Date	23/05/2023
Checked	WR/JD

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Appendix 2: Landscape Plan

NOTE:
SURROUNDING CONTEXTUAL BUILDINGS AND INFORMATION ARE BASED ON RECEIVED ORDNANCE SURVEY DRAWINGS AND ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. ASSUMED SITE BOUNDARY IS SUBJECT TO CONFIRMATION

NORTH

General Notes:

All proposed tree locations are subject to co-ordination with drainage layout and subject to modification depending on the location of underground services and utilities. Drainage engineer to co-ordinate services layout in conjunction with the landscape plan to avoid conflict as much as possible. Allowance to be made at tender stage for the possible requirement for root barriers once the drainage layout is confirmed. CA to be informed immediately once this is available.

PLANTING SCHEDULES:

Trees

Name	Abb.	Form	Girth (cm)	Height (cm)	Clear stem	Root	Total No
Carpinus betulus 'Frans Fontaine'	CbFF	Standard extra heavy	16-18	min 450	min 200	RB	1
Pyrus calleryana 'Chanticleer'	PcC	Standard extra heavy	18-20	450-600	min 220	RB	4

Ornamental Planting

Name	Abb	Height (cm)	Root	Container	Habit	Breaks	Density	Total No
Hebe 'Mrs Winder'	HMW	30-40	C	5L	Bushy	5	4/m²	119
Hebe rakaiensis	Hr	30-40	C	5L	Bushy	5	4/m²	84
Hedera helix 'Glacier'	HhG	40-60	C	3L	Several shoots	-	4/m²	50
Pachysandra terminalis	Pa	15-20D	C	3L	Several shoots	-	4/m²	24
Vinca minor	Vm	/	C	3-4L	V	-	4/m²	27

* Any plants found not to be in accordance with the specification above after post completion site inspection will be replaceable at contractors expense.
* Contractor to ensure numbers on plant schedules match numbers on drawing before placing order for plants.

SOFT LANDSCAPE KEY:

Existing trees to be retained
Retained and protected during construction and landscape works in accordance with BS5837:2012 guidance

Existing trees to be removed
Due to conflict with the development proposals

Proposed Evergreen Tree in soft landscape
Refer to planting schedule for species & specification

Proposed tree in Hard landscape
Refer to plant schedule for species & specification

Proposed ornamental shrub planting
Refer to plant schedule for species & specification

Proposed grass banking area
To be Germinal Seeds RE3 River Floodplain / Water Meadow Mix with plug planting incorporated
(refer to specification for details).

Proposed ornamental bark mulch surface finish
- *1m dia of ornamental bark mulch in accordance with BS8545 :2014 recommendations round tree trunks in grass*
- *500mm maintenance margin / over run strip in car park*

SOFT LANDSCAPE SPECIFICATION

NOTE: All soft landscape works to be carried out in accordance with BS4428:1989.

SUBSOIL
All subsoil should be free draining and well aerated and in accordance with BS 8601:2013
Subsoil should be broken up to relieve compaction and aid drainage prior to topsoiling to the following depths:
- For light and non cohesive subsoils: 300mm
- For stiff clay and cohesive subsoils: 450mm
Immediately before spreading topsoil, remove stones larger than 50mm.
Cultivated subsoil that is used for wildflower grass areas should be minimum 150mm depth.

TOPSOIL
Existing site won topsoil to be reused for soft landscape areas if sufficient quantities are available and the topsoil meets the criteria for multipurpose topsoil as defined in table 1 of BS3882:2015 specification for Topsoil.

If imported topsoil is required it is to be supplied and spread by the main contractor to the approval of the Landscape contractor, in accordance with the parameters of a multi purpose topsoil as laid out in BS 3882 : 2015. To be a natural sandy loam, of medium texture, with a pH between 5.5 and 7.8, not more than slightly stony and free of pernicious weeds. Subsoil to be well broken up prior to top-soiling to relieve compaction. Topsoil depths should be:
Areas for Ornamental Shrub Planting: minimum 400mm
Areas for cultivated turf: minimum 150mm
Note: Contractor to provide soil testing declaration of analysis certification and sample for inspection & approval prior to delivery of any topsoil to site or for any in-situ soil that is being re-used.

CULTIVATION
Weeds to be prevented from seeding or becoming established by applying a suitable herbicide and allowing the correct time to elapse, as directed by the manufacturer. Compacted soil to be broken up to a depth of 100mm, with any stones, grass tufts or rubbish larger than 50mm in any direction to be removed, leaving a regular and even surface. Suitable slow release fertiliser to be supplied and spread @ 50g/m2 to all planted areas (not to wildflower).

CLIMATIC CONDITIONS
Topsoiling should be carried out in the driest conditions possible – cultivation to be carried out when the soil is moist, friable and not waterlogged or frozen. Topsoil should not be handled during or after heavy rainfall or when it is wetter than the plastic limit as defined by BS 3882. Planting should not take place in waterlogged conditions or when the ground is frozen.

SOIL AMELIORANT
Peat-free compost to be spread over ornamental shrub beds @ minimum 50mm depth prior to cultivation. For native planting a 50mm compost layer should be mixed into each whip planting pit only, not spread over the entire bed.

TREES
All trees within shrub beds to be planted in separate pits in accordance with tree planting detail.
All tree planting and post maintenance regimes to comply with BS8545:2014 'Trees from Nursery to Independence in the Landscape' and transported to site in accordance with the HTA Plant Handling Guide: 1996.
All trees to be planted to the original root collar and secured in place with underground guying system in accordance with tree planting detail.
If the trees are planted outside of the planting season then containerised stock to be used in lieu of root balled but the same tree heights are still required - allowance to be made for this at tender stage if required once construction timetable is known and CA informed immediately.

PROPOSED SHRUB PLANTING
All shrubs to be positioned as shown on the drawing and to the density and specification listed in the plant schedule.
Planting holes to be 150mm wider than the root spread, have the base ground thoroughly broken up before planting and backfilled with peat free compost.
All shrubs to be equally spaced throughout the planting areas to the specified density in a staggered arrangement unless otherwise noted in the planting schedule.
Contractor to ensure numbers on schedule match those shown on drawing before placing any orders for plants. Any discrepancies to be brought to the attention of the Landscape Architect upon discovery.
Contractor to check on site dimensions of all landscape areas to ensure specified quantities will achieve the specified densities for each species.

GRASSED AREAS WITH WILDFLOWER PLUG PLANTS:
Seeded areas should be sown in accordance with BS 3969:1998; Recommendations for Turf for general purposes and BS 4428-1989 General Landscape Operations.
The plugs should be scattered randomly throughout the seeded area at a rate of 3/m2 in groups of three to five plugs together of the same species and planted using a bulb planter with each bulb pit part-filled with seed compost before being well watered.
Species composition of the wildflower plugs (25% of each species in the mix): *Alopecurus pratensis, Caltha palustris, Centaurea nigra, Sanguisorba officinalis.*
Watering: keep the plug plants well watered particularly in the first 6 weeks after planting.

Mowing Maintenance to be as follows:
Year One (if Autumn sown): First cut early July, then monthly during August, September and October.
Year One (if Spring sown): First cut mid-September - 1st October and collect the arisings, then monthly during August, September and October.
Initial cutting should ensure that the cutting height of the mower is raised high enough so you are mowing just over the top of the plug plants. Once the plants reach 70mm height this is the final mowing height.
Cutting height: 70-100mm
Thereafter: Cut from mid-July to early September ensuring you collect the arisings. Consider allowing up to a fifth to stand uncut through the winter and cut down and remove the clippings in March the following year, this will provide a habitat for invertebrates and some vertebrates over the winter. Rotate this area so a different section is left uncut each year. This more closely replicates the grazing of animals which would leave some small areas not grazed.

If possible, and with the obvious exception of areas you are leaving uncut, lightly mow the sward down to 70-100mm as required throughout the winter months until March and collect the clippings.

Weeding: No weeding to take place within grass mix unless invasive species are noted on site in which case the CA is to be informed immediately so the necessary remediation works can be carried out.

SUBSTITUTIONS:
Upon submission of evidence that certain materials, including plant materials, are not available at the time of the landscape contract, the Landscape Contractor may be permitted to substitute other materials and plants in exceptional circumstances during the contract with an agreed adjustment of prices.
All substitutions shall be of nearest equivalent species and variety to the original specified but shall be subject to approval by the Landscape Architect before any change is made.

TIMES OF YEAR FOR PLANTING:
Landscape works to be carried out during the final possible planting periods prior to practical completion of the building and associated engineering works / car park areas in accordance with the following:
- Native and ornamental trees: During dormant winter period - Late October to late March (only if planted in the planting season otherwise containerised stock to be used).
- Bare root native transplants: During dormant winter period - Late October to April.
- Container grown ornamental and specimen shrubs: At any time if ground and weather conditions are favourable.

MULCH
75mm depth of 8-35mm ornamental bark mulch (peat-free) to be supplied and spread to all planting areas. Finished mulch level to be installed and maintained at 25mm below any adjacent kerbs or paving surfaces.

MAINTENANCE
All planting areas to be maintained to a high standard by the contractor for 12months after practical completion, to ensure the landscape scheme is successful, and discourage decline of the area.
Minimum frequency of maintenance visits (12 maintenance visits per year):
March to May & September to November - 1No. visit each month
June to August - 2No. visits each month.

Generally, during the first 12months:
- All planting beds to be re-firmed and kept weed free through hand weeding.
- All litter to be picked and removed from landscape areas.
- Mulch to be topped up as required to maintain the specified thickness.
- The condition of all trees is to be regularly checked, with ties and stakes adjusted or replaced as necessary.
- Shrubs to be pruned at appropriate times of year for each species to promote healthy growth and desirable ornamental features.
- Grass areas to be cut and maintained in accordance with specification note above.
- All arisings to be removed from site.
- Any defects or plant losses occurring during the first 12 months defects period to be replaced at the contractors expense.

Following the initial 12 month establishment period the maintenance of the landscaping will be taken on by a professional commercial landscape maintenance contractor under a maintenance contract.

GENERAL WATERING
All soft landscaping to be subject to a watering regime which is absolutely essential to ensure the continued success of the scheme, particularly during the initial 12 month establishment period. The watering frequency should be as necessary to ensure the continued thriving of all grass, hedges, trees and ornamental planting but as a mimumum should follow the maintenance regime as set out above and be carried out at the time of each maintenance visit. During dry periods it may be necessary to increase watering visits to once per week - If the planting is looking dry please contact Landscape Architect to arrange the extra maintenance visits if necessary. The soil should be checked for dryness using either a soil moisture sensor or by inserting a spade into the ground to a depth of 300mm to observe the appearance of the soil. If the soil is moist there is no need to water but if it is bone dry then watering procedure should be carried out immediately. Water supply should be from potable mains water or an approved alternative. The full depth of topsoil should be wet without loosening or damaging plants. Any compacted soil should be broken up sufficiently to allow water to reach the rootzone.

WATERING TREES
Trees to be watered in accordance with BS 8545-2014 Tree - From Nursery to Independence.
Trees should be watered via the installed irrigation / aeration pipes around the base of the trees stem in accordance with the manufacturer's instructions to ensure the water reaches the roots of the tree. Below is a suggested watering regime but this should be used as a guide only and may require modification in times of drought or flood, dependant on the ground conditions at the time, which should be monitored as above:

- March - October: 40 litres to be poured into irrigation pipe on every maintenance visit

Revisions	Description	Drawn	Check
25/01/23 B	4No. car park trees relocated along Huddersfield Road boundary and soft landscape margin added.	NB	AS
22/07/22 A	4No trees added to car park and plug planting added to wildflower mix, at planners request.	DW	DW

Project Title	PROPOSED FOODSTORE DEVELOPMENT HUDDERSFIELD ROAD MIRFIELD	Drawing Title	LANDSCAPE PLAN
		Job-Dwg No	15151-VL L01 Rev B
Client	MORBAINE		
Status	PLANNING		
Scale	1:200	Drawing Size	A0
Drawn By	DW	Checked By	DW
Date	03/22		

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LANDSCAPE DESIGNERS
4 ST JOHNS NORTH, WAKEFIELD, WF1 3QA. TEL 01924 332056
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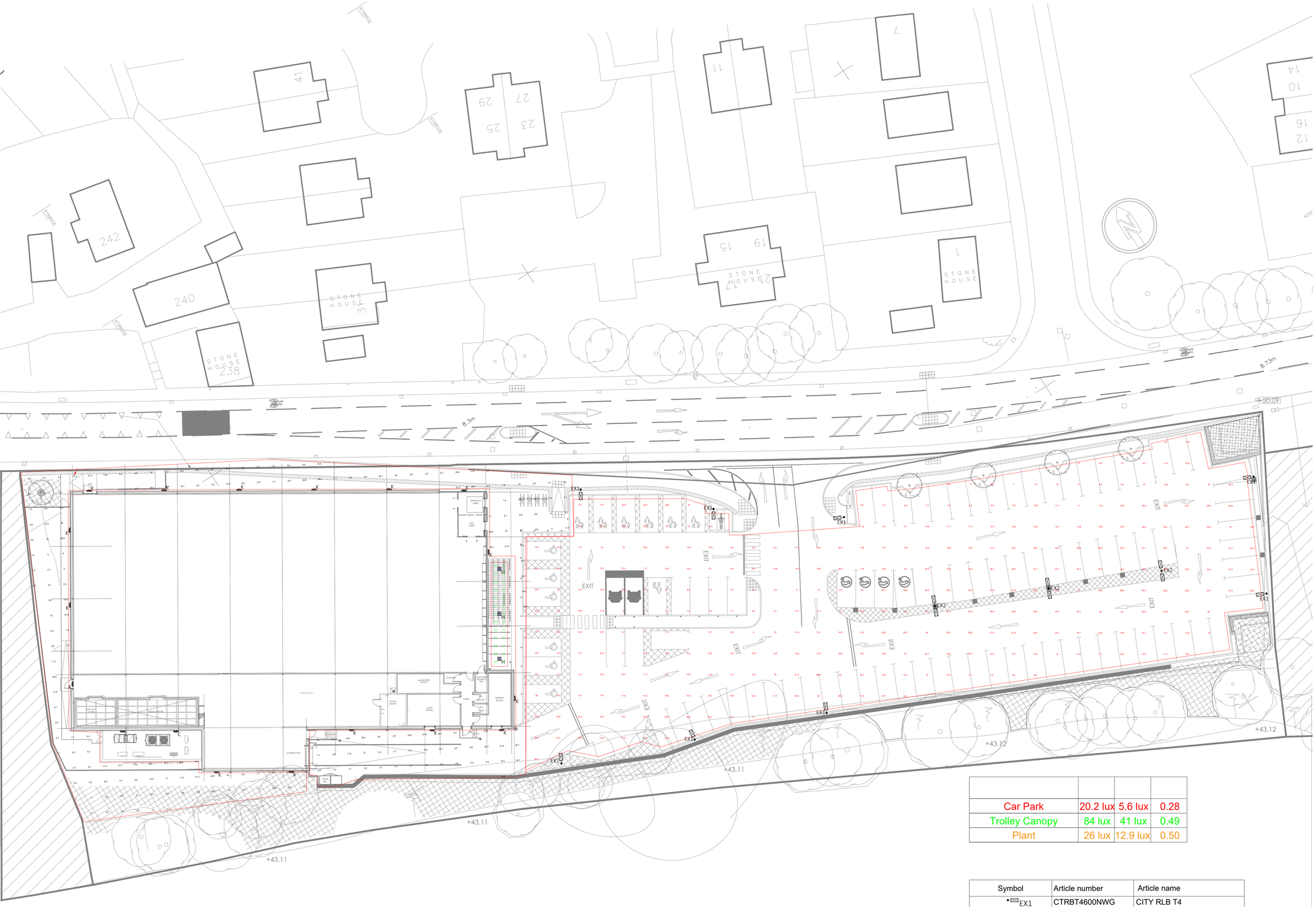
CAD file reference V:\V15001-16000\15151 Mirfield\04 Landscaping\17.0 Drawings and Issue Sheets\100 Series-Planning

Appendix 3: Lighting Strategy

REV	DATE	DESCRIPTION	DRW	CHK
P01	06.03.23	FOR PLANNING	RD	AG



Car Park	20.2 lux	5.6 lux	0.28
Trolley Canopy	84 lux	41 lux	0.49
Plant	26 lux	12.9 lux	0.50

Symbol	Article number	Article name
EX1	CTRBT4600NWG	CITY RLB T4
EX2	2 x CTRT4860NWG	CITY RL T4
K	CBU200WNWG	CITY BEAM
H	SML 250	SML 250
C	CYP5430NW	CYCLONE

Client
ALDI - Aldi Stores Ltd.

Project Title
Aldi HUDDERSFIELD

Project Address
MIRFIELD ROAD
HUDDERSFIELD

Drawing Title
ELECTRICAL ENGINEERING SERVICES
EXTERNAL LIGHTING

Job No.	Originator	Zone	Level	Type	Role
79-E0000	WGC	XX	XX	DR	E

System Classification	Drawing No.	Suitability	Revision
Ss_70_80_25-0001		S01	P01

Drawn	Checked	Date	Scale	Size
RD	AG	06.03.23	1:250	A1

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