

This supplementary planning submission relates to the revised drainage proposals submitted by the applicant on 25th November 2022. It should be read in conjunction with all our previous comments regarding the drainage proposals for this site. For clarity we re-iterate that:

Our main objection is still that the building design, layout and housing density conflict sharply with the rural fringe, Pennine hillside, location and will have an unacceptable adverse impact on the landscape and existing properties bordering the site.

When the Council granted conditional outline planning permission in 2015, for just 27 dwellings, the Council's decision letter said ***"In this instance it is necessary that the layout of the site be interdependent with the existing and proposed drainage infrastructure. A comprehensive layout, taking its form following investigation and consideration of on-site drainage systems and their relationship to adjoining off-site drainage networks, shall be submitted to demonstrate that the site can be satisfactorily drained and to mitigate flood risk."*** We believe that the planning committee were very sensible to impose this requirement and we therefore insist that the developer must ***"demonstrate that the site can be satisfactorily drained" and the "flood risk mitigated", BEFORE PLANNING PERMISSION IS GRANTED.*** We are adamant that this is one site where the complex drainage issues cannot and must not be dealt with as a planning condition, because they are super-critical to the fundamental viability of the development.

The latest drainage plans, published on 25th November 2022, do make some significant improvements to the previously inadequate drainage proposals. The belated improvements include:

- Abandoning the quite ridiculous proposals to discharge site surface water run-off into an old, stone land drain and, instead, extending the discharge point via a new 375mm diameter "culvert diversion" through to Manchester Road. We make no comment on pipe sizing.
- Protection of the spring water source, storage tank and water service pipework serving Far Lower Wood Farm. This includes replacement and diversion of the service pipework
- Installation of a full land drainage system
- Recognition of the true legal status of the "man-made open water channel" and its hydraulic limitations through and downstream of Far Lower Wood Farm.
- Recognition of the need for exceedance flow channels through the development site
- Recognition of the high level of exceedance storm flow frequently running down Lingards Road and its impact on the development and downstream properties.

However, we have to say that the improvements fall substantially short of what is necessary and some serious drainage deficiencies have still not been addressed. They include:

- **Receiving Watercourse.** There is still no evidence that the watercourse running down through the cemetery can accept the increased run-off from the development, plus the added/diverted land drainage and/or diverted exceedance flows. We are staggered that there has been no attempt to survey this watercourse, as it is in an extremely sensitive location, where the consequences of "overtopping, erosion and culvert blockage" could be catastrophic. **The risk is enormous both to the cemetery, the graves within the cemetery and the viability of the development. If this watercourse is not adequate, it will simply veto the entire development, as there are no other practical options for dealing with the whole combined surface water and land drainage flows (apart from taking the entire "clean water" flow all the way down to the River Colne).**
- **Land Drainage system.** The proposed land drainage system is spatially comprehensive, but poorly designed. It starts off as a 450mm pipe at the top end of the site (in the garden of plot number 37) and is joined by two lateral 150mm land drains before discharging into the

“open water channel” that runs across the site. A further 150mm land drain connects into the open water channel, close to a simple “overspill weir” at the boundary of the site. Overspill flow can then run overland down the hill (through the garden of plot number 8) before theoretically being absorbed in to a 300mm land drain and ultimately a 375mm “culvert”. This arrangement is quite simply bizarre and is almost certain to lead to flooding of plot number 8 and numbers 50b & 52 Manchester Road. Flood flow will simply “jump over” the inverted soakaway manhole at the bottom of the garden of plot number 8. It is therefore not a viable drainage design, even without the problems of future root ingress referred to in Kirklees Council’s Lead Flood Authority comment published on 1st December. We support the Lead Flood Authority’s requirement for a 5metre clear planting distance, but fear that it will be almost impossible to deliver in practice, because of the conflict between the extensive land drainage proposals and the on-site landscaping requirements. NB: As a rule, downstream pipes should always be larger than upstream pipes.

- **Open Water Channel / Overspill arrangement.** We are pleased that the developer has recognised the inadequacies of the open water channel and pipework downstream of Far Lower Wood Farm but we question why he has not undertaken the required investigative work to determine an appropriate solution for disposal of the additional land and exceedance flow drainage, as previous planning committees have demanded. We are aghast at the simplistic attempt to limit flow through the garden of Far Lower Wood Farm, via installation of an uncontrolled overspill weir, whilst still adding additional land drainage and exceedance flows to the open water channel. Without proper control arrangements on the channel entering the garden of Far Lower Wood Farm, it is impossible to predict how much flood flow will carry forward and how much will be diverted via the overspill arrangement. It is impossible to say that Far Lower Wood Farm will not be flooded out every time it rains. Quite simply, this is not a viable drainage design, it is legally dubious and it is not acceptable. The problem is that the surface water run-off, land drainage, exceedance flow and man-made water channel systems have been confused by the developer, both technically and legally.
- **Exceedance Flows.** The developer clearly still does not understand the purpose and structural requirements for exceedance flow routes. They are more than pretty, pink arrows, loosely drawn on a “flood route plan”. They must actually work in extreme flood conditions. Firstly and critically, they do not end at the boundary of the site. As it stands the flood route plan merely confirms that exceedance flood flows are likely to inundate the gardens and surroundings of plots 1, 8 and the area around the flats at the Eastern end of the site. They will also inundate the off-site gardens of numbers 50b, 52 and possibly 64 Manchester Road, Far Lower Wood Farm, Lower Wood Farm cottages and Pippin Cottage. This is partly because the developer has simply not considered the impact and routing of exceedance flows once they leave the site. Secondly if a flood route is to be effective it needs to be supported by physical infrastructure such as higher kerb lines in key places, avoidance of “dropped” kerbs which lead to driveways sloping away from the intended route and physical reinforcement of flood routes in vulnerable areas – e.g. steep unpaved / grassed slopes, steps and areas with underlying critical infrastructure. A particularly vulnerable point within the plans is the co-existence of the main flood exceedance route and critical foul and surface water outfall routes. In simple terms we are pleased that the developer has recognised the need, but the plans need to go much further before we can say that the proposals will actually work and meet SUDS requirements.
- **Attenuation Tank** The developer has argued that the attenuation tank is underground and is therefore not visible (in the green belt). This is extraordinarily dismissive and wrong. He has (on 1st December) submitted a new cross section through the tank, which clearly shows the land profile will have to be significantly changed and raised by up to 2.5 metres. We say that this is unacceptable, given that the proposed site of the attenuation tank is green belt land

even though it does not actually need to be sited on green belt land. It could be sited under the road serving the site. The concrete wall of the tank may not be visible in the green belt but the changed land profile, on an already very steep side slope will be very obvious and overbearing. It is therefore inappropriate development within the green belt. Of equal concern is the finished steep slope of the ground above the tank and between the tank and the access point to the on-site road hammerhead. Attenuation tanks need to be regularly maintained and this requires vehicular access. In our view the proposed finished slope of the ground, and the very steep access to it, makes maintenance access virtually impossible. The tank is therefore not maintainable and will not be adoptable by Yorkshire Water. That means the on-site sewers will not be adoptable either.

- **Private Drainage System** We have previously articulated our concerns about the “private” drainage system at the Eastern end of the site. Our concerns remain valid, as the developer has made no attempt to address them in his latest submissions.

In simple terms the drainage proposals are still unacceptable. Given the legal and technical issues we think the developer would be better off thinking of the site drainage as seven entirely separate networks:-

1. A main adoptable foul water drainage system (split into two discharge points – East and West)
2. An adoptable surface water drainage system (serving roads, roofs and paved areas)
3. A private (?) surface water system at the Eastern end of the site (we would prefer this to be adoptable, but it is not mandatory)
4. A comprehensive land drainage system
5. A water supply system for the farm, including the upstream water collection system, storage tank, open water channel and connecting service pipework
6. An exceedance flow system
7. An off-site watercourse system at the Western end of the site. This is split in to two parts – a) the defined existing watercourse, as it runs through the cemetery and b) the diverted “watercourse” between the site and Manchester Road. The two parts are defined by different legal and technical problems.

In our view there needs to be particularly clear distinction and separation between the land drainage system, the water supply system to the farm and the exceedance flow system, which the current plans fail to recognise. They should not interchange and interact as current plans indicate. This is as much a legal issue, as it is an engineering issue.

Generally speaking we support the additional comments made by the Kirklees Lead Flood Authority on 16th November 2022. However, we remain adamant that these must be addressed BEFORE planning permission is granted and that they are not dealt with as a planning condition. This is because of the very serious nature of some of the drainage problems and the lack of attention paid to them in the planning process so far. In short, we have absolutely no confidence that they will be properly addressed if they are left to be dealt with as a planning condition.