

Feasibility Study for the positioning of a Multi Use Games Area at Great Somerford Chippenham

There are a number of factors to take into account when deciding where a MUGA could be constructed on the Glebe Field or in the Free Gardens.


Factors to take into account - Nos 1 to 6

1. Noise:

There is no minimum distance or buffer when locating a Multi Use Games Area (MUGA) near residential dwellings but many local planning authorities recommend a buffer zone of approximately 30 meters from residential properties for noise mitigation.

The Fields in Trust Standards document (the FIT standards) recommend a 30m distance from the nearest occupied dwelling

Sport England makes no stipulations on the distances from occupied dwellings

Based upon the above factors I have used the 30m recommended distance and show it marked up on each Option Location plan using a symbol to  indicate the 30m distances from occupied housing

Another option is to consider what mitigation measures could be used such as natural noise barriers like hedges or earth berms

All of these can be used to deflect sound upwards and away from housing

Another option is to install perimeter kick boards 1.2m high which can also deflect and minimise the transference of sound

2. High Voltage Overhead Cables

There are no restrictions in regard to constructing a MUGA beneath HV cables in the available literature from Sport England

However there are two hazards to consider, although both are controllable.

Firstly there is a potential hazard from construction equipment making contact with the cables

The second hazard is that of a MUGA user who could potentially come into contact or be near enough for an electrocution incident. (An example would be a Kite flying hazard)

For the purposes of choosing a location I have avoided the MUGA being underneath or close to the high voltage cables which run through and across the two sites.

3. Lighting

Light spill and light causing annoyance to local house owners

No flood lighting is proposed for the MUGA

4. Safety concerns

The facility will be constructed to standards that minimise the hazards created by persons using the facility

Potential hazards are slips trips and falls which can cause head injury or skin grazing and which are directly related to the surface that is chosen This also applies to the maintenance regime of the MUGA which should remove leaf and tree litter off the surface

If the tree and leaf litter is left in situ then it will mulch down and cause the surface to become slippery and unsafe.

5. Maintenance of the Facility

The usual work required is to keep leaf litter off the surface as if left it will mulch down and cause the playing surface to become slippery (See item 4)

The second task is to keep litter off the surface

Thirdly weeds and moss growth should be treated at least once a year to maintain a clean surface

Fourthly depending upon the surface chosen there may be a requirement to regularly brush the surface to redistribute the infill material.

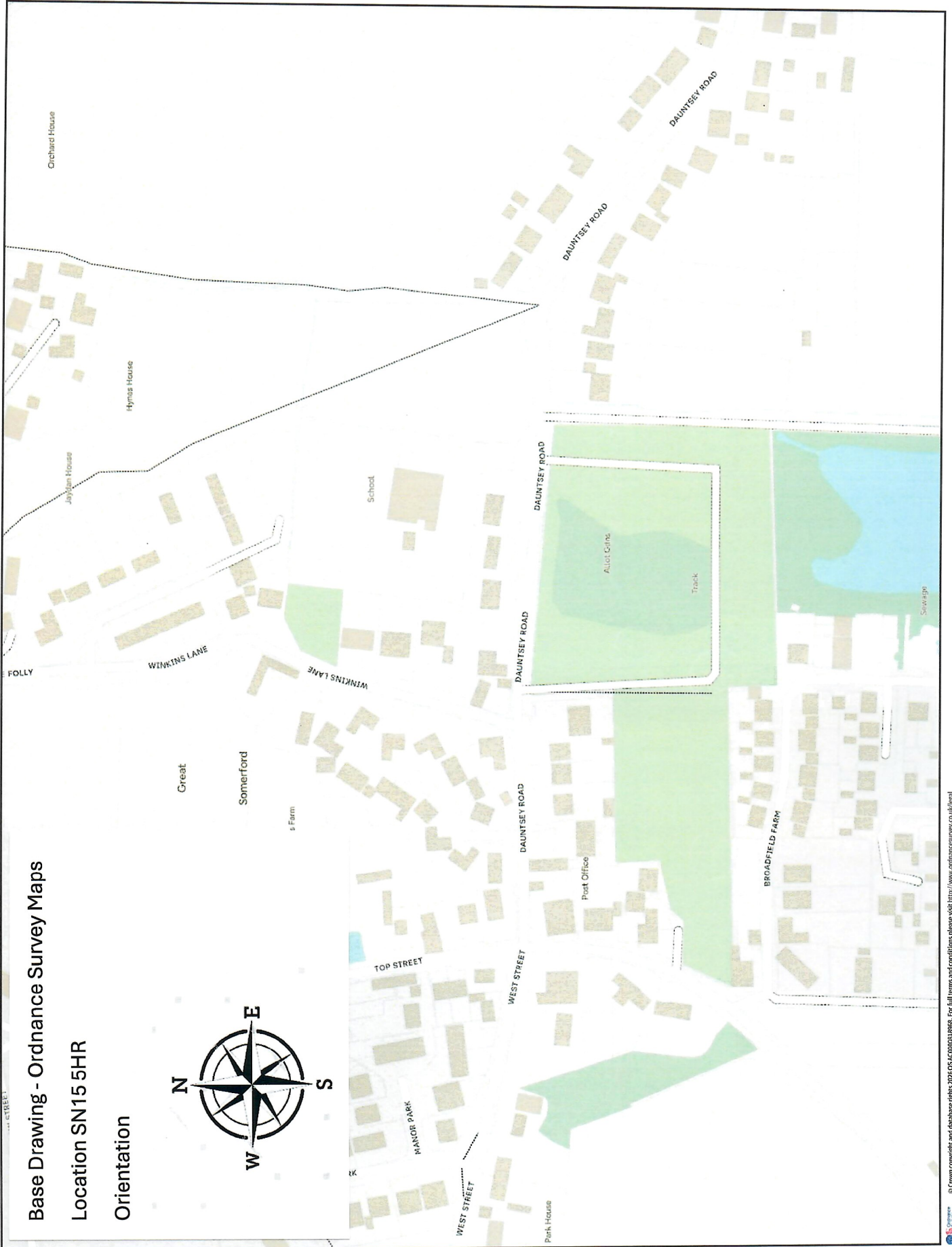
6. Tree protection Orders (TPOs)

I am not aware of any TPOs which could affect where the MUGA is built

Base Drawing - Ordnance Survey Maps

Location SN15 5HR

Orientation



Glebe Field

Glebe field is grassy and fairly flat and stretches northwards from Dauntsey Rd towards Frog Lane and then further North towards the Brook Farm development.

Topographical notes on using Glebe field for your MUGA

- There are HV cables crossing from the North East corner down to the South West corner
- A foul sewer runs from the South East corner towards the North and then goes into the Brook Farm development
- There is an underground cable supplying electricity to the school which runs East to West
- There is also a ditch or watercourse halfway up the field running from Frog Lane Eastwards to the boundary and then up the boundary towards the North
- There are residential properties along the Northern boundary

The options for positioning a MUGA in the Glebe field which takes into account the listed factors, points 1 to 5 and the topographical notes are.

Option 1

This option places the MUGA on a West to East trajectory which is the preference for the LTA and maintains a 30m distance from the nearest property.

The MUGA position can be moved further to the right to accommodate the HV cables and still maintain the recommended 30m noise disturbance distance

Access to the MUGA would need to be made off Dauntsey Road and be wide enough so that a small tractor to get onto the MUGA for occasional maintenance purposes. This access could use the existing footpath route as a base option.

This orientation would keep the MUGA away from the overhead HV cables

Groundworks for this option are relatively straight forward in that excavation of the turf and soil could be disposed of locally

Option 1 would require some additional cost to create an access path off Dauntsey Rd and across the existing ditch

Location – 1 – In Glebe Field close to Dauntsey Road

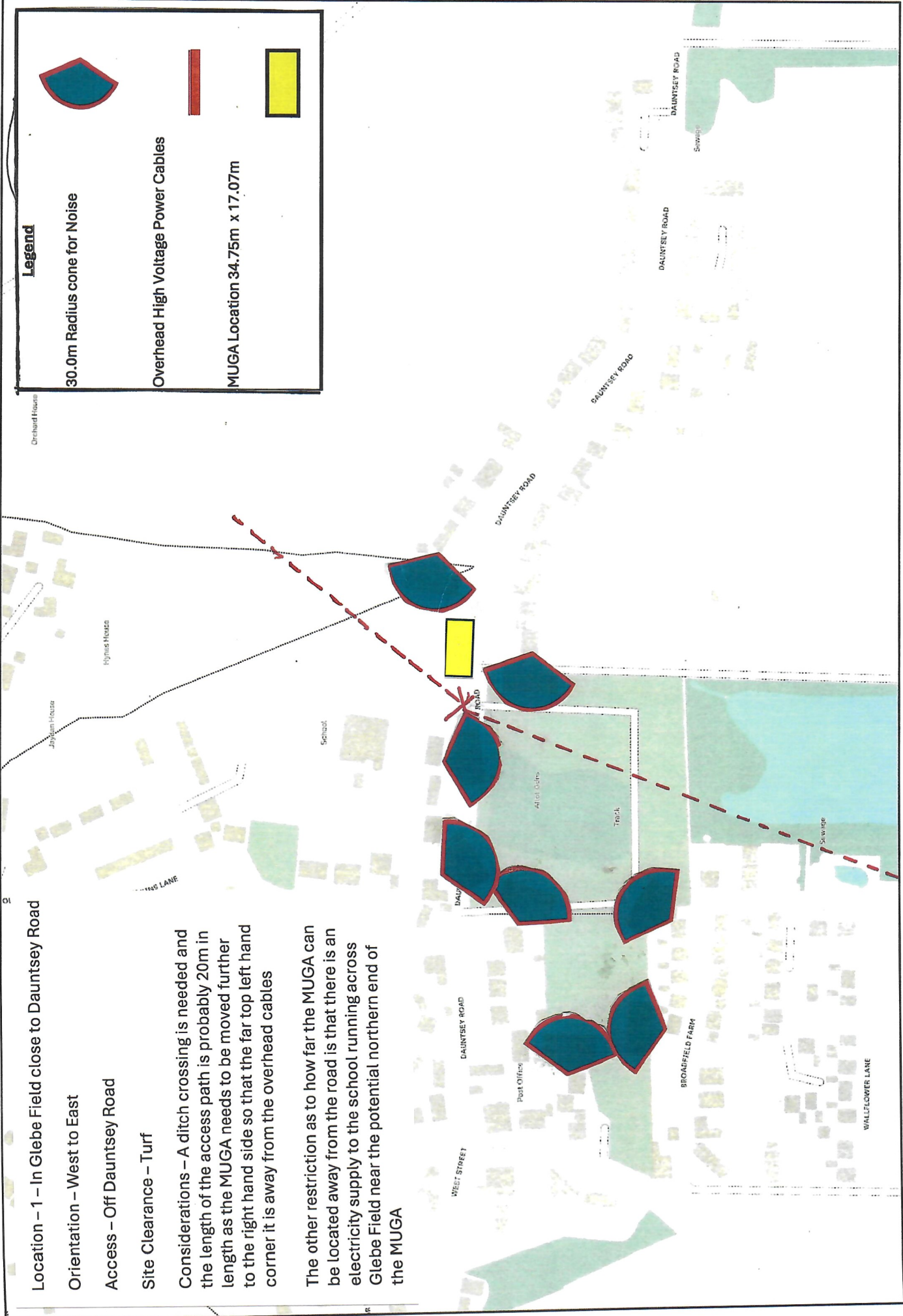
Orientation – West to East

Access – Off Dauntsey Road

Site Clearance – Turf

Considerations – A ditch crossing is needed and the length of the access path is probably 20m in length as the MUGA needs to be moved further to the right hand side so that the far top left hand corner it is away from the overhead cables

The other restriction as to how far the MUGA can be located away from the road is that there is an electricity supply to the school running across Glebe Field near the potential northern end of the MUGA



Legend

30.0m Radius cone for Noise



Overhead High Voltage Power Cables



MUGA Location 34.75m x 17.07m



Option 2

This option places the MUGA on a North to South trajectory and maintains a 30m distance from the nearest property.

This could also benefit the school pending a shared access and use agreement

Access to the MUGA would need to be made off Dauntsey Road and be wide enough so that a small tractor to get onto the MUGA for occasional maintenance purposes

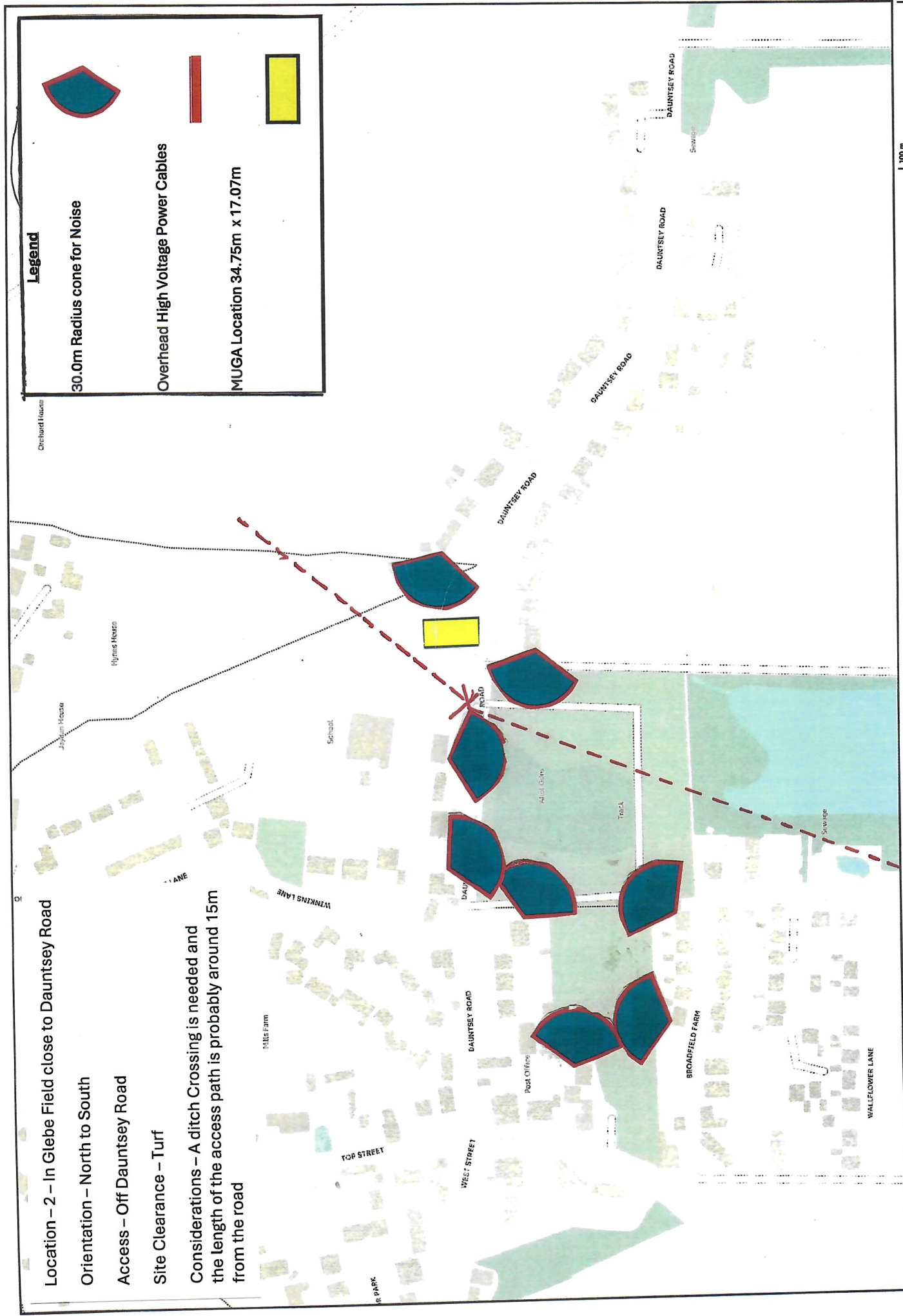
This access could use the existing footpath route as a base option.

The downside of this orientation is that it would bring the MUGA close to the overhead HV cables

Groundworks for this option are relatively straight forward in that excavation of the turf and soil could be disposed of locally

Option 2 would require some additional cost to create an access path off Dauntsey Rd and across the existing ditch

Further commentary on this location is to be found on the location picture



Legend



30.0m Radius cone for Noise

Overhead High Voltage Power Cables



MUGA Location 34.75m x 17.07m



Location - 2 - In Glebe Field close to Dauntsey Road

Orientation - North to South

Access - Off Dauntsey Road

Site Clearance - Turf

Considerations - A ditch Crossing is needed and the length of the access path is probably around 15m from the road

The Free Gardens

The free gardens are fairly flat and comprise many allotments.

There is also a grove of fairly mature trees in the centre of the Free Gardens.

The Northern boundary to the Free Gardens is Dauntsey Road and the Eastern boundary is off Seagry Road

There are residential properties close to the South West boundary and also to the North West

To the South there is a gravel lake together with housing on Broadfield Farm Road

The Eastern boundary has a hedge alongside a farm access road separating it from some housing

The options for positioning a MUGA the Free Gardens whilst taking into account the listed factors, of points 1 to 5 are in my opinion:

Option 3

Access to the MUGA would need to be made off Dauntsey Road and be a long paved path but which is wide enough so that a small tractor to get onto the MUGA for occasional maintenance purposes

The downside of a long path is that MUGA users may not stick to the path and will likely bring mud into the surface

This location is away from overhead cables and is also away from any housing

There are no trees to be removed and construction traffic would use the new pathway for access to the main site

Further commentary on this location is to be found on the location picture

Location - 3 - In the Great Somerford Free Gardens (Lower righthand corner near the lake)

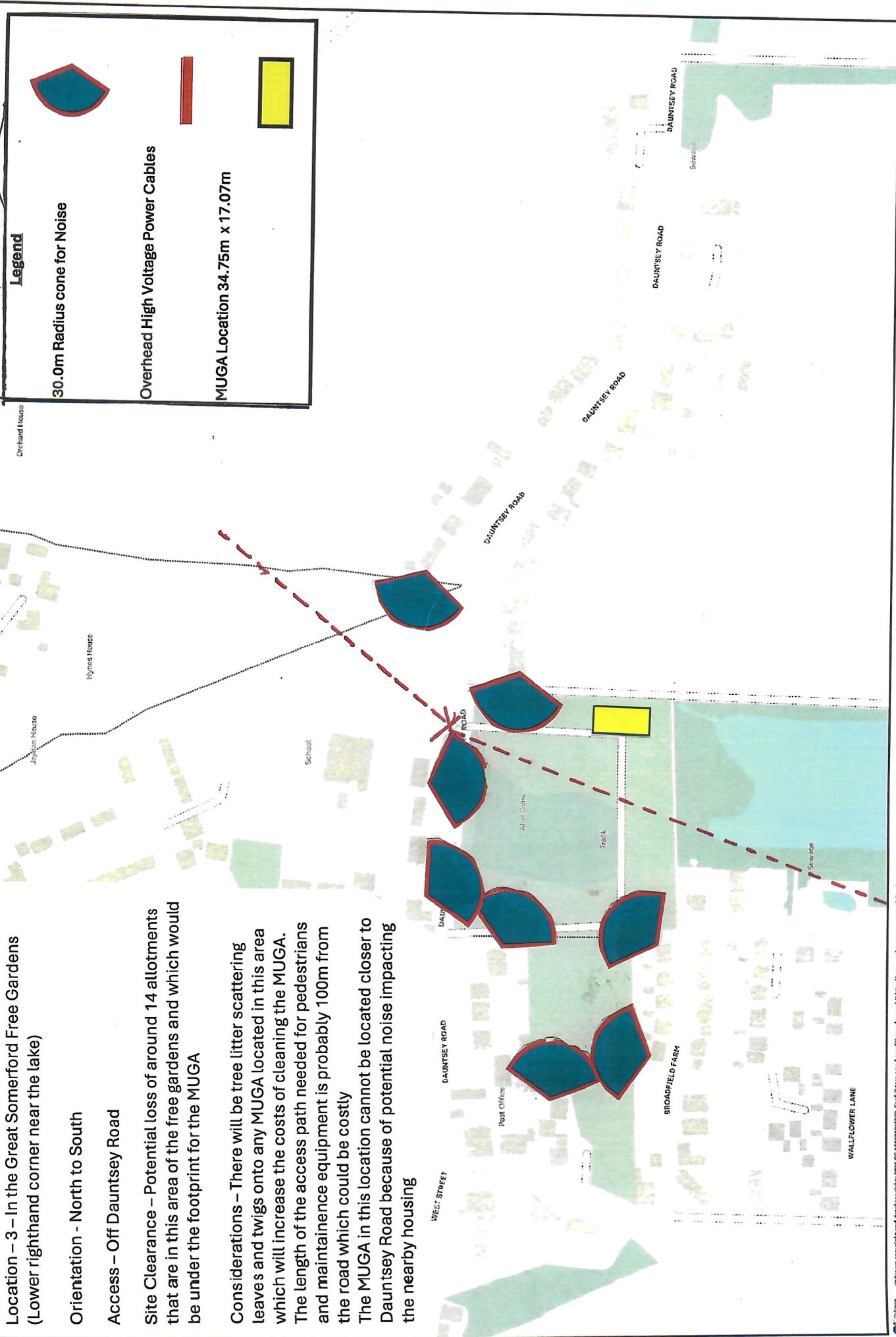
Orientation - North to South

Access - Off Dauntsey Road

Site Clearance - Potential loss of around 14 allotments that are in this area of the free gardens and which would be under the footprint for the MUGA

Considerations - There will be tree litter scattering leaves and twigs onto any MUGA located in this area which will increase the costs of cleaning the MUGA. The length of the access path needed for pedestrians and maintenance equipment is probably 100m from the road which could be costly

The MUGA in this location cannot be located closer to Dauntsey Road because of potential noise impacting the nearby housing



Option 4

This option for your MUGA could also benefit the school pending a shared access and use agreement

Access to the MUGA would need to be made off Dauntsey Road and be wide enough so that a small tractor to get onto the MUGA for occasional maintenance purposes

The benefit of this location is that it would keep the MUGA away from the overhead HV cables but it will also be close to housing

On the downside there are a number of trees that will need to be dug up and removed and the orientation is West to East

I don't think that any trees will need to be removed for construction traffic

Further commentary on this location is to be found on the location picture

Location - 4 - In the Great Somerford Free Gardens (Close to Dauntsey Road)

Orientation - West to East

Access - Off Dauntsey Road

Site Clearance - Mostly Trees (Around nine mature trees and some lower shrubs)

Considerations - The length of an access path is probably 15m from the road and the MUGA will be quite close to houses (Noise)

Legend

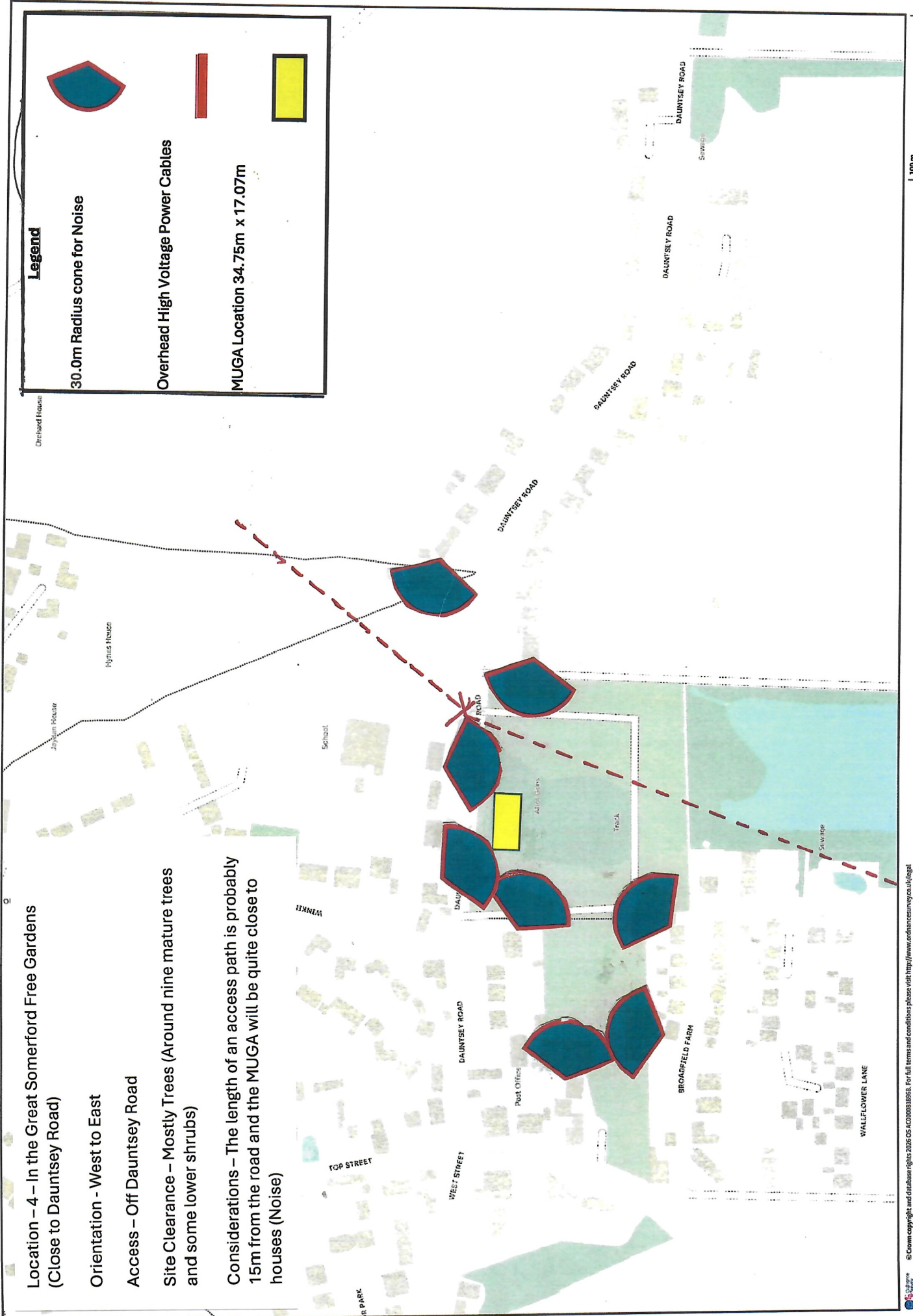
30.0m Radius cone for Noise



Overhead High Voltage Power Cables



MUGA Location 34.75m x 17.07m



Option 5

This puts the MUGA in the middle of the Free Gardens and the grove of trees.

Access to the MUGA would need to be made off Dauntsey Road and be a long paved path which is wide enough so that a small tractor to get onto the MUGA for occasional maintenance purposes

The downside of a long path is that MUGA users may not stick to the path and will likely bring mud into the surface

This location is away from overhead cables and is also away from any housing

What mitigates against this location is that there are a large number of fairly mature trees that will need to be dug up and removed

There may also be a need to remove a few trees to allow construction traffic to access the MUGA site

Further commentary on this location is to be found on the location picture

Location – 5 – In the Great Somerford Free Gardens
(In the middle of the grove of young trees)

Orientation – North to South

Access – Off Dauntsey Road

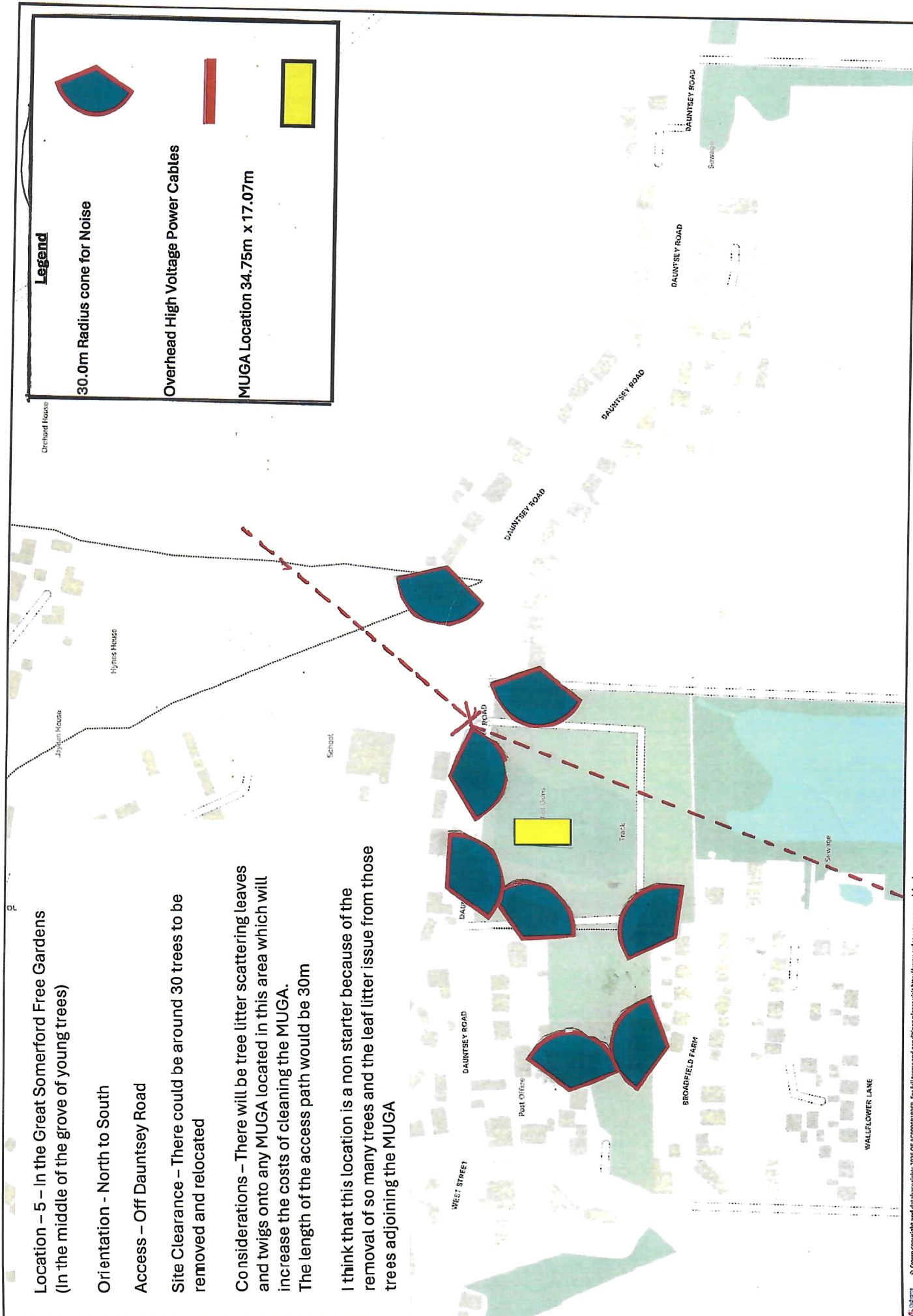
Site Clearance – There could be around 30 trees to be removed and relocated

Considerations – There will be tree litter scattering leaves and twigs onto any MUGA located in this area which will increase the costs of cleaning the MUGA. The length of the access path would be 30m

I think that this location is a non starter because of the removal of so many trees and the leaf litter issue from those trees adjoining the MUGA

Legend

- 30.0m Radius cone for Noise
- Overhead High Voltage Power Cables
- MUGA Location 34.75m x 17.07m



Option 6

This puts the MUGA to the western end of the Free Gardens and into the middle of many allotments

Access to the MUGA could need to be made off Dauntsey Road or Seagry Road and would be a very long paved path which is wide enough so that a small tractor to get onto the MUGA for occasional maintenance purposes

The downside of a long path is that MUGA users may not stick to the path and will likely bring mud into the surface and its costly

This location is away from overhead cables and is far enough (30m) away from housing

Construction traffic would use the new pathway for access to the main site

What also mitigates against this location is that there are a large number of allotments that would be lost to this location

Further commentary on this location is to be found on the location picture

Location – 6 – In the Great Somerford Free Gardens
(Towards the left hand end)

Orientation - North to South

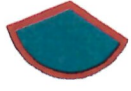
Access – Off Dauntsey Road or Seagry Road

Site Clearance – Potential loss of around 20+ allotments
under the footprint for the MUGA

Considerations – Tree Litter Length of access path the
length of the access path needed is probably 15m from
the road
The length of an access path needed for pedestrians and
maintenance equipment is probably 100m from whichever
road you come off

I think that this location is a non starter because it is too
far away from an access point and will take up too many
allotments

Legend

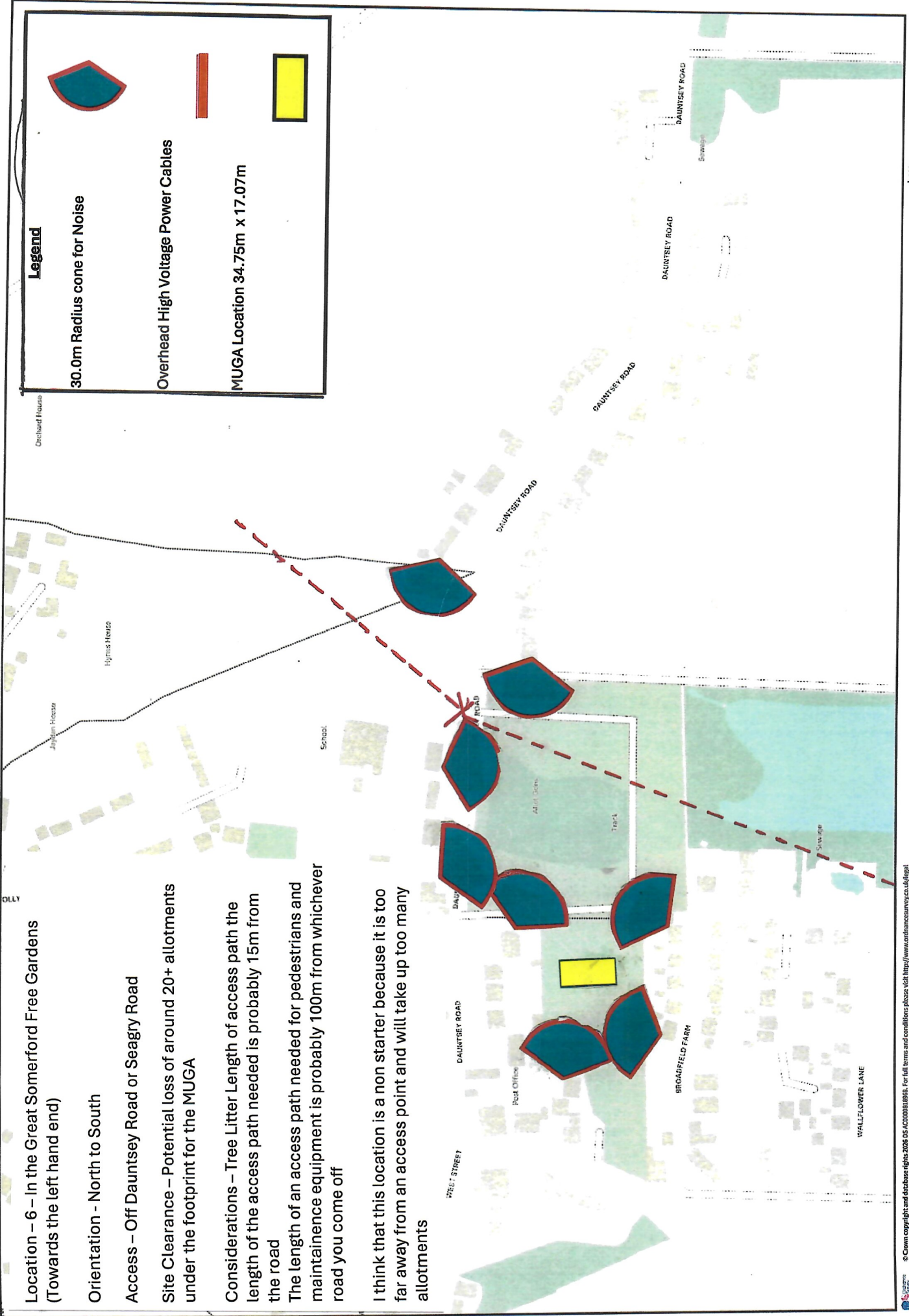


30.0m Radius cone for Noise

Overhead High Voltage Power Cables



MUGA Location 34.75m x 17.07m



Option 7

This option places the MUGA on a North South trajectory which is the preference for the LTA and maintains a 30m distance from the nearest property and is away from the high voltage cables

Access to the MUGA would need to be made off Dauntsey Road and be wide enough so that a small tractor to get onto the MUGA for occasional maintenance purposes.

Groundworks for this option are relatively straight forward in that excavation of the turf and soil could be disposed of locally

Construction traffic would use the new pathway for access to the main site

This location would require additional cost to create a very long access path off Dauntsey Rd, across the existing ditch, and across the Glebe field

Further commentary on this location is to be found on the location picture

Location – 7 In the middle of the Glebe Field

Orientation - North to South

Access – Off Dauntsey Road

Site Clearance – Turf

Considerations – A ditch crossing is needed and the length of the access path is in excess of 100m in length, there are also site restrictions such as a main sewer, and ditches across the field

I think that this location is a non starter for the above reasons

Legend



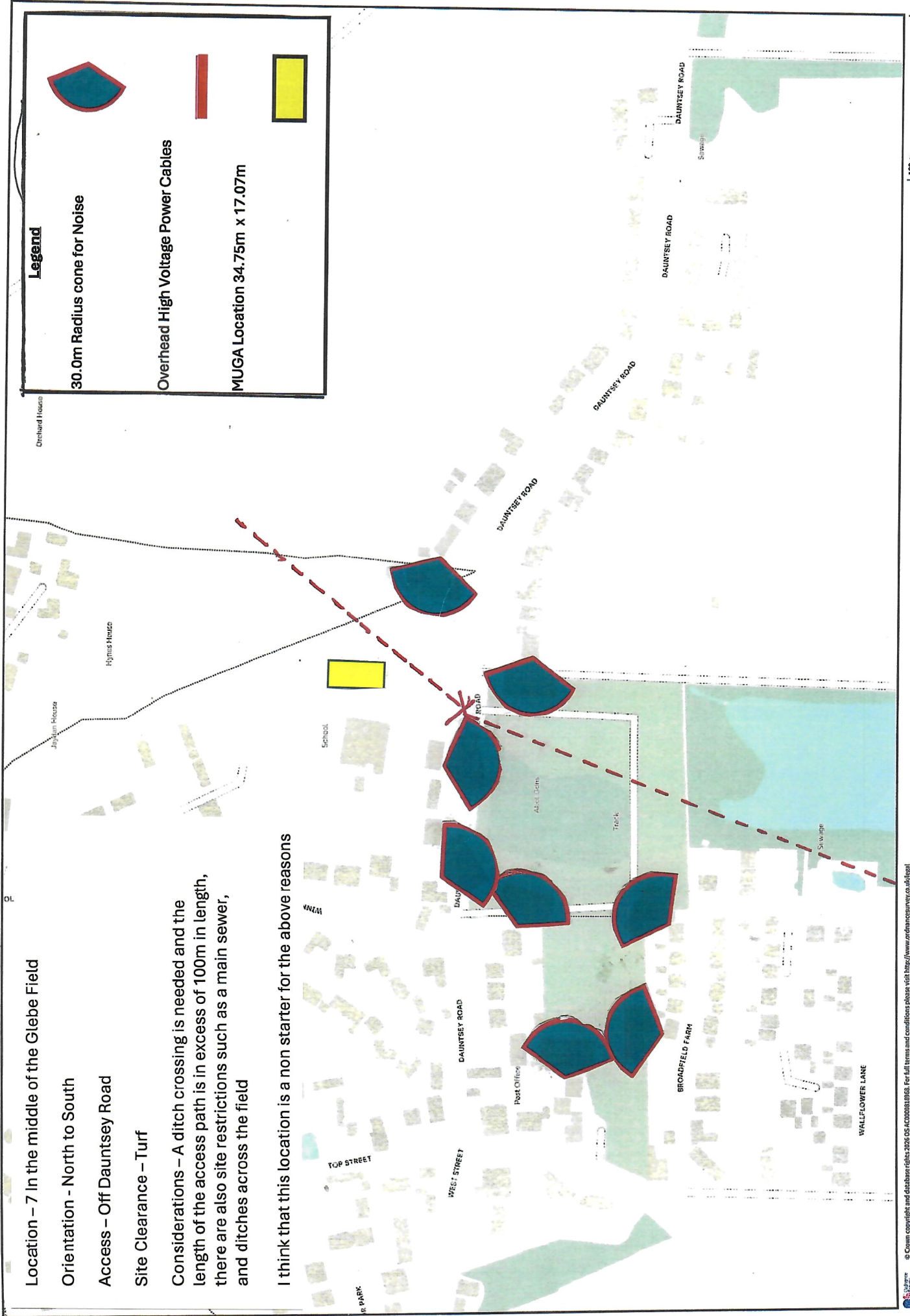
30.0m Radius cone for Noise



Overhead High Voltage Power Cables



MUGA Location 34.75m x 17.07m



Initial Design proposals and projected costs of the MUGA

The budget cost to build a MUGA of this size (34.75m x 17.07m) is in my estimate between £91,000.00 to £108,000.00 plus VAT

Football Goals or Goal recesses could be built into the MUGA by extending the ends for a short distance to make space for football goals (And for storage)

This cost covers the site excavation and construction of an engineered base, overlaid with a suitable artificial turf and if necessary a shockpad

Markings will be provided for tennis and football.

You will also need two post holes, posts and a net and somewhere to store that piece of equipment should you want to play tennis on the surface.

The fencing chosen will be a robust twin bar with a minimum height of 3.0m

Some additional cost will be needed to form an access footpath from the Dauntsey road to whichever location for the MUGA you choose.

The access path would need to be 1.80m wide and would be constructed by excavating the soil, putting down a geotechnical sheet, and then putting in a hardcore base. Installing edging kerbs haunched in concrete.

The top surface would be a two course open textured tarmac finish
(The estimate for this would be £125.00 per M2)

You should allow for some costs for supplying any sports play equipment (Tennis posts, nets, football goals, basketball hoops)

If you wanted 1.20m high kick boards instead of a timber skirting then that addition would add another £8,400.00 plus VAT to the overall cost

Drainage - The arrangements for rainfall runoff collection and disposal would be either into an existing ditch or into a soakaway

Timeline

- When the site for the MUGA has been agreed you will need to obtain planning consent.
- Planning Consent – Three Months
- Specification and tendering action – Two months
- Contractor selection and lead in – One month
- Construction on site – 4 to 6 Weeks (Weather dependent)

Conclusion

Ranked by Location

- **No 1**
FOR:
This location avoids the high voltage cables
The access road is quite short
The MUGA is visible from the road which makes keeping an eye on it easier.
There is also the additional benefit that the MUGA could be used by the school and there are no road crossings for the children to navigate.

AGAINST:
The MUGA would be aligned West to East which is not ideal for the LTA
- **No 2**
FOR:
This location is aligned North to South which is to the LTA ideal.
Again the MUGA is visible from the road which makes keeping an eye on it easier.
There is also the benefit that it could be used by the school and there are no road crossings for the children to navigate.

AGAINST:
To avoid the high voltage cables the MUGA will need to be moved towards the eastern end of the Glebe field, and this could extend the length of the access road and therefore cost
- **No 3**
FOR:
This location tucks the MUGA out of site

AGAINST:
The access path is quite long
There are nearby trees which will add to your maintenance costs
You would lose some allotment space.
- **No 4**
FOR:
This location is close to the road so access and visibility would be good
There are only a few trees to be moved and there is no loss of allotment use

AGAINST
The down side is that the nearby houses will likely hear some of the noise.

- No 5
FOR:
There are no allotments being lost which is beneficial

AGAINST:

This location is right in the middle of your newish tree plantation in the free gardens.

Whilst the MUGA will be screened by other trees there will be more maintenance required due to tree litter.

- No 6
FOR:
None

AGAINST

This location is in the middle of the free gardens

It is quite close to housing

There will be the loss of quite a few allotments.

Access again is from a long paved path at a cost to the budget

- No 7
FOR:
Nothing comes to mind

AGAINST:

This location is a long distance away from any access, and very isolated so control of access onto the MUGA will be difficult to manage

Access again is from a long paved path which will add cost to the budget both for constructing the path and for construction equipment getting onto the site